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Date: December 18, 2001

By:

Kay L. Gaviglio

PATENT
Docket No. GC558D3

J1011 U.S. PTO
10/026139
12/18/01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)	
)	
Manoj Kumar)	Group Art Unit: Unassigned
)	
Serial No.: Unassigned)	Examiner: Unassigned
)	
Filed: Herewith)	
)	
For: Production of Ascorbic Acid)	

Information Disclosure Statement

Commissioner of Patents
U.S. Patent and Trademark Office
P. O. Box 2327
Arlington, VA 22202

Sir:

Applicants submit herewith patents, publications or other information (listed on the attached Form PTO-1449 and attached thereto) of which they are aware, that they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56.

This Information Disclosure Statement:

- (a) ☒ accompanies the new patent application submitted herewith. 37 CFR §1.97(a).
- (b) ☐ is filed within three months after the filing date of the application or within three months after the date of entry into the national stage of a PCT application as set forth in 37 CFR §1.491.
- (c) ☐ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits.
- (d) ☐ is filed after the first Office Action and more than three months after the application filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final

rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee (\$240) set forth in 37 CFR §1.17(p) **or** a certification as specified in 37 CFR §1.97(e), as checked below. Authorization to charge Deposit Account No. 07-1048 in the amount of \$240.00 to cover the cost of this Information Disclosure Statement is provided in the Transmittal Letter submitted herewith in duplicate.

(e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by authorization (in the Transmittal Letter submitted herewith in duplicate) to charge Deposit Account No. 07-1048 the fee (\$240) set forth in 37 CFR §1.17(l)(1) **and** a certification as specified in 37 CFR §1.97(e), as checked below. **This document is to be considered as a petition requesting consideration of the Supplemental Information Disclosure Statement.**

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR §1.97(e) may need to be completed.] The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ No item of information contained in this Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

A copy of the items on Form PTO-1449 is supplied: PCT International Search Report for PCT/US 99/28699, filed December 3, 1999, with attached patents and publications.

☐ each ☒ none ☐ only those listed below:

Those patent(s) or publication(s) which are marked with an asterisk (*) on the attached Form PTO-1449 are not supplied because they were previously cited by or submitted to the Office in a prior application, Serial No. 09/205,874 filed January 9, 2001, and relied upon in this application for an earlier filing date under 35 USC 120.

A concise explanation of relevance of the items listed on PTO-1449 is:

☒ not given

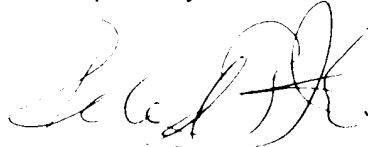
- ☐ given for each listed item
- ☐ given for only non-English language listed item(s)
- ☐ in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

The Examiner is reminded that a "concise explanation of the relevance" of the submitted prior art "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention." MPEP §609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR §1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR §1.97(b), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR §1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR §1.98 and MPEP §609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,



Richard T. Ito
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Date: December 18, 2001

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INFORMATION DISCLOSURE CITATION

Attorney Docket No.: GC558D3	Serial No.: Unassigned
Applicant: Kumar	
Filing Date: Unassigned	Group: Unassigned
Page <u>1</u> of <u>2</u>	Date of this Submission: December 18, 2001

J101 U.S. PTO

10/026119

12/16/01

US PATENT DOCUMENTS

Examiner's	Document				Sub-	Filing
Initial	Number	Date	Name	Class	Class	Date
	*4,595,659	Jun. 17, 1986	Roland et al.			
	*4,757,012	Jul. 12, 1988	Estell et al.			
	*4,758,514	Jul. 10, 1988	Light et al.			
	*4,916,068	Apr. 10, 1990	Roland et al.			
	*5,004,690	Apr. 2, 1991	Light et al.			
	*5,032,514	Jul. 16, 1991	Anderson et al.			

FOREIGN PATENT DOCUMENTS

Examiner's	Document				Sub-	Translation
Initials	Number	Date	Country	Class	Class	Yes/No
	*WO 85/01745	25 April 1985	PCT			
	*WO 87/00863 A	12 Feb 1987	PCT			
	*WO 96/12846	2 May 1996	PCT			

OTHER DOCUMENTS

Examiner's	
Initials	Author, Title, Date, Pertinent Pages, etc.
	*Bleeg, "L-Ascorbic Acid in Yeast and Isolation of L-Galactono- γ -Lactone Oxidase from the Mitochondria", <i>Enzymologia acta biocatalytica</i> , Uitgeverij Dr. W. Junk - Den Haag, 1966 pp.105-112
	*Bleeg, "Biosynthesis of Ascorbate in Yeast", <i>Eur. J. Biochem</i> , 127, 391-396 (1982) FEBS 1982
	*Bunton et al., "The Determination of Ascorbic and Erythorbic Acids in Meat Products", <i>J. Assoc. Publ. Analysts</i> , 1979, 17, 105,-110
	*Chemical Abstract, V. 84 (5), 2 Feb. 1976, Columbus Ohio, US, Abstract No. 29189, OBATA, YASUO et al: L-Ascorbic acid XP002135678 abstract and JP 50 022113 b (Takeda Chemical Industries, LTD., Japan) 28 July 1975
	*Costamagna et al., "Ascorbic acid specific utilization by some yeasts", <i>Can. J. Microbiol.</i> Vol. 32, June 12, 1986, pp 756-758
	*Frey et al., "The Molecular Biology of Inc Q Plasmids", <i>Replication Proteins of the IncQ Plasmid RSF1010</i> , pp 79-94
	*Frey et al., "Replication and copy number control of the broad-host-range plasmid RSF1010", <i>Gene</i> , 113 (1992) 101-106
	*Grindley et al., "Conversion of Glucose to 2-Keto-L-Gulonate, an Intermediate in L-Acorbate Synthesis, by a Recombinant Strain of <i>Erwinia citreus</i> . <i>Applied and Environmental Microbiology</i> ", July 1988, p. 1770-1775
	*Haller et al., "Enzymatic Synthesis of L-Ascorbic Acid. 3 L-Galactono-Gamma-Lactone Oxidase from Yeasts", <i>Dechema Biotechnology Conferences</i> , DE, Weinheim, V. 4, 1 January 1990, pp. 233-236. XP000646759 ISSN: 0934-3792
	*Heick et al., "Occurrence of ascorbic acid in the yeast <i>Lipomyces starkeyi</i> ", <i>Canadian Journal of Biochemistry</i> , vol. 47, 1969, pp 752-753

Examiner	Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not

considered. Include copy of this form with next communication to applicant.
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Examiner's	
Initials	Author, Title, Date, Pertinent Pages, etc.

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Attorney Docket No.: GC558D3	Serial No.: Unassigned
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Page <u>2</u> of <u>2</u>	Date of this Submission: December 18, 2001

US PATENT DOCUMENTS

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Initial	Number	Date	Name	Class	Class	Date

FOREIGN PATENT DOCUMENTS

Examiner's	Document				Sub-	Translation
Initials	Number	Date	Country	Class	Class	Yes/No

OTHER DOCUMENTS

Examiner's	
Initials	Author, Title, Date, Pertinent Pages, etc.
	*Izumi et al., "NADH production from NAD using a Formate Dehydrogenase System with Cells of a Methanol-Utilizing Bacterium", <i>J. Ferment. Technol.</i> , vol. 61, No. 2, p. 135-142, 1983
	*Kulbe et al., "Enzyme-Catalyzed Production of Mannitol and Gluconic Acid", <i>Annals of the New York Academy of Sciences</i> , volume 506, 1987, pp 552-568
	*Loewus et al., "Conversion of D-Arabinose to D-erythroascorbic Acid and Oxalic Acid in <i>Sclerotinia Sclerotiorum</i> ," <i>Biochemical and Biophysical Res. Comm.</i> , V. 212:1 1995 pp. 196-203
	*Matsushita et al., "Membrane-Bound D-Gluconate Dehydrogenase from <i>Pseudomonas aeruginosa</i> ", <i>J. Biochem.</i> , vol. 85, No.5, pp 1173-1181, 1979
	*McIntire et al., "Identification of the covalently bound flavins of D-gluconate dehydrogenases from <i>Pseudomonas aeruginosa</i> and <i>Pseudomonas fluorescens</i> and of 2-keto-D-gluconate dehydrogenase from <i>Gluconobacter melanogenus</i> ", <i>Biochem. J.</i> (1985), 231, 651-654
	*Murakawa, et al., "Biosynthesis of D-Erythroascorbic Acid by <i>Candida</i> ," <i>Agric. Biol. Chem.</i> , 41(9), pp. 1799-1800, 1977
	*Neijssel et al., "Physiological Significance and Bioenergetic Aspects of Glucose Dehydrogenase", <i>Antonie Van Leeuwenhoek</i> , vol 56, 51-61, 1989
	*Nishikimi et al., "Occurrence in Yeast of L-Galactonolactone Oxidase Which is Similar to a Key Enzyme for Ascorbic Acid Biosynthesis in Animals, L-Gulonolactone Oxidase", <i>Archives of Biochemistry and Biophysics</i> , vol. 191, No 2, December, pp 479-486, 1978
	*Pachla et al., "Determination of Ascorbic Acid in Foodstuffs, Pharmaceuticals, and Body Fluids by Liquid Chromatography with Electrochemical Detection", <i>Analytical Chemistry</i> , vol. 48, No 2, February 1976, pp 364-367
	*Saito et al., "Cloning of Genes Coding for L-Sorbose and L-Sorbose Dehydrogenases from <i>Gluconobacter oxydans</i> and Microbial Production of 2-Keto-L-Gulonate, a Precursor of L-Ascorbic Acid, in a Recombinant <i>G. oxydans</i> Strain", <i>Applied and Environmental Microbiology</i> , Feb. 1977, p. 454-460
	*Shinagawa et al., "2-Keto-D-gluconate Dehydrogenase from <i>Gluconobacter melanogenus</i> , Membrane-Bound, <i>Oxidation-Reduction Enzymes</i> ", <i>Methods in Enzymology</i> , vol. 89, pp 194-198, 1991
	*Simons et al., "Aerobic 2-ketogluconate metabolism of <i>Klebsiella pneumoniae</i> NCTC 418 grown in chemostat culture", <i>Journal of General Microbiology</i> (1991), 137, 1479-1483
	*Smith et al., Purification and characterization of glucose dehydrogenase from the thermoacidophilic archaeobacterium <i>Thermoplasma acidophilum</i> , <i>Biochem. J.</i> (1989), 261, 973-977
	*Stoshane et al., "Fermentation of Glucose by <i>Acetobacter melanogenus</i> ", <i>Biotechnology and Bioengineering</i> , vol. XIX, Pages 459, 465, 1977
	*Takahashi et al., "Ascorbic Acid Analogs as Indirect Products of <i>Serratia marcescens</i> ," <i>Agr. Biol. Chem.</i> , 40 (6), pp. 1255-1256, 1976
	*Truesdell et al., "Pathways for Metabolism of Ketoaldonic Acids in an <i>Erwinia</i> sp.", <i>Journal of Bacteriology</i> , Nov. 1991, V. 173:21 pp. 6651-6656

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